MariBeth Baloga
"Terra Matter: Inspire, Innovate, and Sustain": a symposium, May 19 & 20, New York City

I attended a two day symposium in New York sponsored by Material Connexion, a company which is a source of cutting edge materials for architects, artists and designers from all disciplines.
See:www.materialconnexion.com

The mission of the conference, which was titled "Terra Matter: Inspire, Innovate, and Sustain", was to examine the role of the material used by artists and designers as key elements of inspiration, to showcase some of the most noteworthy innovations in materials, and to discuss issues of sustainability as both an ecological concern and an economic consideration.

At the end of this paper, is a copy of the agenda and short biographies of the speakers. I thought it would be more informative to focus on three of the speakers that I found interesting and informative, than to summarize all of the presentations and panels.

Natalie Chanin: Head Designer and Design Director for Project Alabama

Project Alabama was started in 2000 when Chanin began working with women in rural Alabama to realize her fashion vision. Chanin works with discarded 100% cotton tee shirts found in scrap heaps and thrift stores, transforming them into sophisticated garments that are now sold at exclusive stores around the world. Her garments are made from scraps of fabric that are pieced, layered and seamed together by hand. Project Alabama, is both a business and a social undertaking. Chanin hopes to revitalize a community that whose economic base (the textile industry) was lost with advent of NAFTA and the relocation of most of the industry to developing nations as well as to sustain the long tradition of home sewing and quilting of the rural south.

It takes a great deal of time to produce each of Chanin's designs – it can take as long as three weeks for sixteen women to hand sew the garments. Initially this business was structured as a cottage industry ; each seamstress/quilter worked individually at home using a "package" of materials and instructions that they were provided. In response to labor laws the structure has changed and the women now meet to work together in a central facility in a format that is like a quilting bee.

Chanin is concerned not only with the sustainability of the material, but also in producing a well crafted product that will last a long time - a goal which is in direct opposition to the planned obsolescence typical of the fashion industry.

Individuals who find Chanin's clothing line beyond their means can now purchase a package with materials and instructions from Project Alabama. Additionally, Chanin is working on a book of hand sewing techniques to help consumers design and make their own version of her clothing. She has also produced a film entitled "The Stitch" which will be released soon.

Chanin has agreed to be one of the mentors in the fashion program this fall. Needless to say, we are very pleased to have the opportunity to work with her and to expose our students to a very creative and economically successful response to the pressing issue of sustainability.

For more information, please visit these websites:
www.projectalabama.com
http://nymag.com/fashion/fashionshows/2006/spring/main/newyork/runway/projectalabama/
http://www.dallasnews.com/texasliving/fashion/fdluxe/pdf/0602/012.PDF

Jill Dumain: Director of Environmental Analysis at Patagonia

Jill Dumain began her presentation by talking about Evan Chounaird, the company's founder. As a surfer and a climber, Chounaird founded the company with the goals of making long lasting products in a manner that would not be harmful to the environment. . When making business decisions, Patagonia considers the "ecological footprint" that they will make. This "footprint" includes not only on the resources used, but also the impact of the production process on the environment, the resources used by the consumer to maintain the product, and end of life issues (what happens to the product when the consumer discards the product).

Patagonia also makes decisions about environmental issues related to their products by considering what impact they can have on the industries with which they work. For example, they may not be able to influence the decisions made by the oil industry, but because of the quantity of cotton they purchase they can impact the cotton growing industry. In 1996 Patagonia committed to making all of their cotton garments from 100% organic cotton and became active participants in the "Sustainable Cotton Project"
For more information about this project please visit: www.sustainablecotton.org.

Patagonia was one of the first companies to use organic cotton and now is one of a small but growing number of companies working solely with organic cotton. Cotton is a natural fiber and is promoted as the "fiber of our lives". However the fact that is not mentioned in the marketing of cotton is that a tremendous amount of pesticides are used on cotton crops causing pollution and affecting the health of those working in the fields.

As we find ourselves faced with mountains of refuse, the focus in many environmental discussions naturally turns to end of life issues. Cotton is biodegradable so the environmental concern is the pesticides used in growing cotton. However, Patagonia also uses polyester, a petroleum product that uses energy in production, causes pollution in processing, and does not biodegrade. Patagonia was one of the first companies to use recycled plastic bottles to make fibers and fleece fabrics. The initial technology consisted of shredding the plastic, melting and reforming it into fiber. However the only type of fabric that could be made from the recycled plastic was fleece. Plastic bottles (which are easily identified) can be recycled if the effort is made be consumers, businesses and institutions of higher learning, but the polyester that is blended with other fibers in fabric is not easily identified, so is not recycled and is not biodegradable.

Patagonia is now working with a Japanese company that has developed a new technology which, working at a molecular level, de-polymerizes and reforms the polymers, which will result in the production of a wider range of fabrics.

Through a program called "Common Threads Recycling Program" , Patagonia is making a concerted effort to reclaim and recycle the polyester that they use in manufacturing. This is evident in their program statement:"Patagonia will, however, collect unwanted polyester Capilene underwear and process their fibers into genuine new garments. Thanks largely to the EcoCircle fibre-to-fibre recycling system developed by Teijin, of Japan, it's figured that the resulting born-again fibre will save 76% of the energy and 71% of the CO_2 emissions of using virgin polyester. Customers can start returning garments as of 12 September 05."
(For more information please visit: http://www.patagonia.com/web/us/contribution/patagonia.go?assetid=1956).

Other ecological efforts made by Patagonia include the use of solar panels in their facilities to produce energy, skylights, disassembling buildings and re-using materials, and producing their catalogue from 40% post consumer waste.

For More information please visit:: http://www.patagonia.com/web/us/contribution/patagonia.go?assetid=1964

(To read about Patagonia's efforts to incorporate organic wool into their clothing line, please visit: http://www.apparelmag.com/articles/may/may06_3.shtml)

Michael Braungart: co-founder of McDonough, Braungart Design Chemistry (MBDC) and co-author of "Cradle to Cradle"

Michael Braungart is a chemist and a molecular concept designer with a decidedly different approach to the ecological issues confronting us. He challenges current ecological strategies which propose that the solution is to reduce and minimize the negative consequences of production and consumption. Braungart's agenda as put forth in "Cradle to Cradle", co-authored with William McDonough, is to fit products in the "Cradle to Cradle" framework and focus on maximizing the benefit rather than reducing the harm.

For more information please visit these websites:
www.braungart.com/vision.htm
http://www.mbdc.com/

The 'Cradle to Cradle' framework creates systems of consumption and production in which materials move cyclically into appropriate biological or technological nutrient cycles, consistently replenishing themselves. These are closed cycles in which materials are broken down and used as the "nutrients" for new products. Thus, in this process, "waste equals food".

Raw materials used in manufacturing are categorized according to their impact on the health of humans, animals and the environment, eliminating all elements known to be dangerously harmful, and tolerating some substances that are not ideal but deemed necessary until substitutes are found. For this system to be the most successful, manufacturers need to be committed to selecting raw materials that are not only harmless but are actually beneficial.

In the "Cradle to Cradle" structure, products that will be consumed by humans and animals are made from substances that are part of the biological nutrient cycle, returning to the earth as a nutrient and causing no harm to the environment or the consumer. Products that will be used but not consumed by humans, such as cars, appliances, light fixtures, etc., are made from technical nutrients that are not biodegradable, but can be recycled .

The "Cradle to Cradle" concept shifts the focus from minimizing harm to maximizing benefits, working with nature, and at the same time creating products with economic value.

Here are some interesting tidbits from the conference:

One of the unexpected themes that surfaced repeatedly at this conference was that of sustaining local communities economically by acknowledging and celebrating their culture. It seems a fitting irony that globalization would become the impetus for some businesses to refocus their vision from markets abroad to those in their backyard.

Just because a fiber is made from natural elements or occurs in nature in fiber form, such as cotton or bamboo, it doesn't necessarily mean the manufacture or processing of that fiber has no harmful impact on the environment.

> For example, one of the exciting new fibers on the market is bamboo. Among other things, it's being blended with cashmere to lower the cost of the fabric and produce a luxuriously soft fabric Fabric made from bamboo is biodegradable. However the processing of bamboo results in a great deal of greenhouse gases. Patagonia decided not to work with Bamboo for this reason.

There is a new type of plastic available on the market that is not petroleum based. It is made from 100% sustainable agricultural resources such as corn, and it is biodegradable. This biotechnical material can be used to make products such as plastic bottles, fiberfil, baby wipes, diapers, packing materials. Currently products made from this new material (PLA poly lactic acid) make up a very small part of the market because the material is new and needs to be marketed to the consumer, and it currently costs about 4xs that of oil based plastics. Ingeo Fibers ™, produced by Cargill, is one of the new biotechnical made from PLA. It is marketed by NatureWorks LLC. and promoted as a an earth friendly fiber because it is made from natural renewable resources (corn) and it is biodegradeable. It is biodegradeable however left to the natural degradation process it takes about ten years to breakdown. These fibers cannot be composted (shredded, melted and reformed), but they can be rehydrolized and reformed. This requires that they be collected, identified as PLA products and kept separate from oil based synthetics, i.e. there must be a collection program in place. Ingeo has offered to buy back their fiber products if and when any of their buyers have collected a truck load of recyclable PLA fiber products. In other words, they've capitalized on the idea of environmental responsibility, but placed the actual responsibility on the shoulders of those who sell their products. To date not one truckload of used goods has been returned to be recycled.

http://www.earthpledge.org/pdf/0718_GR_USAToday.pdf